

## REMARKS

Claims 1-18 are pending in the present application. Claims 1, 7, 12, and 17 are independent claims. Claims 1-18 currently stand rejected as unpatentable under 35 U.S.C. 103(a).

To clarify an inherent feature of the claimed invention, Applicants have amended independent claims 1, 7, 12, and 17 to note that the invention operates on an unmodified CDMA network. Applicants submit that this feature further patentably distinguishes the claimed invention from the cited references, taken either individually or in combination. In light of the amendment and the remarks presented below, Applicants respectfully traverse the rejection and request allowance of all claims of the present application.

### REJECTION UNDER 35 U.S.C. §103

#### Claims 1, 12, 7, and 17

The Office Action rejected claims 1, 12, 17, and 17 under 35 U.S.C. §103 as being unpatentable over U.S. Patent Publication No. 2004/0116155 by to Aisenberg et al. (hereinafter “Aisenberg”) in view of U.S. Patent No. 7,043,238 by Ahn et al. (hereinafter “Ahn”), and further in view of U.S. Patent No. 6,320,873 by Nevo et al. (hereinafter “Nevo”).

The Office has the burden under 35 U.S.C. § 103 to establish a *prima facie* case of obviousness. *In re Piasecki*, 745 F.2d 1468, 1471-72, 223 USPQ 785, 787 (Fed. Cir. 1984). To establish a *prima facie* case of obviousness, three basic criteria must be met. First, the prior art references must teach or suggest all the claim limitations. Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference

teachings. Third, there must be a reasonable expectation of success. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP § 2143 - § 2143.03 for decisions pertinent to each of these criteria.

#### Claimed Elements are Not Taught or Suggested by the Prior Art

Independent claims 1, 7, 12, and 17 recite, *inter alia*, a GGG being configured to support communication between a GSM network and an unmodified CDMA network to enable a mobile station (MS) subscribed in the GSM network to communicate using the CDMA network, ... wherein when the mobile station is a CDMA mobile station with a subscription in the GSM network during registration of the mobile station, the GGG acts as an authentication controller in the unmodified CDMA network, but authenticates the mobile station using the GSM authentication mechanism. Thus, in the present application, an exemplary embodiment according to independent claims 1, 7, 12, and 17 includes a General Global Gateway (GGM) which internetworks between the CDMA and the GSM networks. Mobile stations of GSM network support a GSM signaling protocol and a GSM authentication procedure. Mobile stations of the CDMA network support a CDMA signaling protocol and a CDMA authentication procedure (Pg. 2, paragraph [0023]). During registration of a CDMA mobile station subscribing in the GSM core services, the GGG acts as an Authentication Controller in the CDMA network, but authenticates the CDMA mobile station using the GSM authentication procedure. Likewise, during registration of a GSM mobile station with a subscription in the CDMA core services, the GGG acts as an Authentication Controller in the GSM network, but

authenticates the GSM station using the CDMA authentication procedure (Pg. 2, paragraph [0024]).

The Office Action cites Aisenberg as disclosing a *general global gateway (GGG) being configured to support communications between a GSM network and a CDMA network to enable the mobile station subscribed in the GSM network to communicate using the CDMA network.*

Aisenberg is directed to a single-network (GSM) telephony device with an interchangeable memory module (such as a SIM or Ram card) for backing up of information accumulated and stored on a cellular telephone (Pg.2, paragraph [0030], Pg.3, paragraphs [0034] and [0036]). Aisenberg teaches a transfer programming capability enabling the memory module of a cellular telephone to transfer the accumulated information between different types of cellular telephonic devices, such as when a user (or a family with multiple users) has multiple cellular phones and wishes to exchange some information between them. Aisenberg is not concerned with communications between telephonic networks supported by different standards. Rather, Aisenberg teaches that while the user's communications are within the single GSM network, "the external transfer module is beneficial for use with a variety of cellular telephones which are not of the GSM type ....for providing effective transfer of information between these different types of telephone technologies", whereby "... a user who has a non-GSM type telephone may provide a back-up of their personal information...and can subsequently transfer the information to the GSM or other type telephone" (Pg. 4, paragraph [0043]). Additionally, while Aisenberg discloses that the memory module may store some data obtained from automatic dial up to the Internet or access gateway, the communication is limited to the use of transfer programming for downloading certain content from the Internet to keep the information on the cellular phone current. While, the sections of Aisenberg (Fig. 11, paragraphs [0002] and [0046]) cited in the Office Action all teach backing-up data from a mobile device onto a

memory module or another mobile device, Aisenberg does not teach a GGG configured to support communication between a GSM network and CDMA network to enable a mobile station (MS) subscribed in the GSM network to communicate using the CDMA network as claimed.

Furthermore, since Aisenberg is concerned with operating on a single-network system, no registration or authentication for the telephonic/messaging communications in a different network is needed. Thus, Aisenberg also fails to teach that during registration of the mobile station, the GGG acts as an authentication controller in the unmodified CDMA network, but authenticates the mobile station using the GSM authentication mechanism.

The Office Action relies on Ahn as teaching *the GGG being configured to support communications between a GSM network and a CDMA network and on enabling the mobile station subscribed in the GSM network to communicate using the CDMA network*. Specifically, the Office Action states that Ahn (Fig. 3, Col. 1, line 56 to Col. 2, line 38, and Col. 5, lines 24-39) discloses a gateway that supports communication between a GSM and CDMA network so that a mobile station subscribed to the GSM network can communicate using the CDMA network.

Ahn teaches a system comprising a CDMA terminal with a GSM SIM card installed within it to provide roaming access to a GSM service subscriber in the CDMA service area. Ahn does not contemplate using the CDMA network for these purposes. In Ahn, the information on the GSM service subscribers is stored on the SIM, connected to a controller, which transmits the data to the GSM service subscriber via the SIM interface and a CDMA burst channel. (Col. 4, lines 32-50). There is no teaching in Ahn of a GGG that functions as an authentication controller as claimed. Although Ahn is directed to a roaming gateway (IRGS) that connects the GSM and CDMA networks, the IRGS performs only functions of a visitor

location register (VLR) for the GSM network and a home location register (HLR) for the CDMA network. (Col. 6, line 62 to Col. 6, line 3). Applicants submit that, in fact, the CDMA terminal in Ahn communicates via the GSM SIM card, and not via the CDMA network, and therefore teaches away from the GGG having such characteristics. Specifically, the reference teaches: "The CDMA terminal that accommodates the GSM SIM card requires additional functions for transmitting and receiving data required by the GSM system...One of the additional functions is ...to deliver data to the GSM system that is in need for user authentication when registering the location of a roaming subscriber" (Col. 6, lines 4-11). Thus, Ahn fails to teach either a GGG configured to support communication between a GSM network and CDMA network to enable a mobile station (MS) subscribed in the GSM network to communicate using the CDMA network or that during registration of the mobile station, the GGG acts as an authentication controller in the unmodified CDMA network, but authenticates the mobile station using the GSM authentication mechanism.

Moreover, when authentication of the GSM service subscriber is required, transmission and receiving of authentication data in Ahn is performed via a CDMA data burst message transmission, and this function is also performed by the CDMA terminal, and not by a GGG (Col. 6, lines 8-14). To the contrary, the authentication function in the claimed invention is performed by the GGG. Additionally, the data burst messaging authentication in Ahn results in modification of the CDMA network. (Col. 6, lines 11-14). To the contrary, in the claimed invention since the GSM and CDMA mobile stations support the standard GSM and CDMA signaling and authentication protocols, respectively, the GGG can act in either network during the registration as an authentication controller and use the authentication mechanism of the other network, without modifying either network. Thus, Ahn also fails to teach that during registration of the mobile station, the GGG acts as an authentication controller in the

unmodified CDMA network, but authenticates the mobile station using the GSM authentication mechanism.

The Office Action further relies on Nevo as teaching *a system and method for providing authentication of a mobile terminal in a hybrid network where when the mobile station is a CDMA mobile station, with a subscription in the GSM network, during registration or the mobile station a GGG acts as an authentication mechanism.*

Nevo discloses a hybrid GSM/CDMA cellular communication system built around a public land mobile network (PLMN) and based on the GSM communications standard. A mobile station (MS) in Nevo is capable of communicating directly with both the GSM base station subsystem (BSS) and the CDMA BSS. To sustain the capability for direct communications, each MS comprises two interfaces, a GSM interface and a CDMA interface or a single interface that switches between the CDMA and GSM protocols (Col. 6, lines 1-6 and 16-21). The reference does not teach separate GSM and CDMA mobile stations supported each by a respective GSM or CDMA standard signaling and authentication protocols. While the MS communicates with the GSM BSS using a standard GSM-based (TDMA) protocol, and with the CDMA BSS using a standard CDMA-based (TIA/EIA) protocol, the rest of the communications in the system are GSM-based (Col. 4, lines 57-60 and Col. 5, lines 17-49). Specifically, both the CDMA BSS and GSM BSS are controlled by and communicate with a mobile switch center (MSC) through the GSM network in accordance with the GSM standard. Likewise, the MS communicates with a general packet service network GSM SGSN and with a gateway GPRC using the GSN network and the GPRS standard protocols. The only communication in Nevo supported by the CDMA network is the communications between the CDMA interface of the MS and the CDMA BSS (Col. 5, lines 17-29). Nevo fails to teach the GGG configured to support communication between a GSM network and CDMA network to enable a mobile

station (MS) subscribed in the GSM network to communicate using the CDMA network.

Moreover, while the MSC is responsible for the registration of the subscriber units, the function of subscriber's authentication is performed on another, upper level of communications between the MS and the SGSN (Col. 6, lines 22-39). To support the counterpart interface's signaling standards, both MS interfaces are modified during the authentication (Col. 6, lines 40-42).

Therefore, Nevo also fails to provide any teaching or suggestion that during registration of the mobile station, the GGG acts as an authentication controller in the unmodified CDMA network, but authenticates the mobile station using the GSM authentication mechanism.

Since Aisenberg, Ahn and Nevo each fail to teach or suggest the invention as claimed in independent claims 1, 7, 12, and 17, any combination of these references also fail to teach the elements of the above claims.

#### No Motivation to Combine Cited References

Applicants submit that one of the ordinary skill would have found no motivation to combine Aisenberg, Ahn, and Nevo as the Examiner alleged in the Office Action.

"In determining the propriety of the Patent Office case for obviousness in the first instance, it is necessary to ascertain whether or not the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the reference before him to make the proposed substitution, combination, or other modification." *In re Linter*, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972). The teaching or suggestion to make the claimed combination must be found in the prior art, not in the Applicant's disclosure.

As stated above, Aisenberg teaches a single-network (GSM) telephony device with a memory module that is enabled to share or transfer information accumulated in the memory to and from a cellular phone. Ahn, on the other hand, discloses a system that provides a roaming service to a GSM subscriber in the CDMA service area via a CDMA terminal enhanced with a GSM SIM card. Nevo discloses a mobile station having two interfaces for direct communications with a GSM BSS and a CDMA BSS using predominately the standard GSM-based protocol. Both Ahn and Nevo teach systems operable in at least two different networks. Using the single-network structure of Aisenberg within the environment of either Ahn or Nevo would defeat the purpose of each of the two references. Similarly, the structure of Ahn's CDMA terminal enhanced with a GSM SIM card would frustrate the Nevo's objective to allow simultaneous operation of two interfaces in a single MS because the function of one of the MS interfaces is already performed by the Ahn's GSM SIM card. Consequently, the cited prior art references operate on different communication architectures which combination is incompatible. Applicants submit that one of ordinary skill would not be motivated by the teachings of Ahn and Nevo to modify Aisenberg to develop the GGG configured to support communication between a GSM network and an unmodified CDMA network as claimed in independent claims 1, 7, 12, 17.

#### No Reasonable Expectation of Success

Even if the references were combined, albeit improperly in Applicants' opinion, as described above, Applicants submit that the combination of the references does not teach or suggest the GGG of independent claims 1, 7, 12, and 17. On the contrary, the properties and characteristics of the claimed subject matter are different and surpassing the prior art. The combination of cited prior art references would have a mobile station that has two interfaces –



one for communications in each the CDMA and the GSM networks, communicating predominately according to the GSM standard. In addition, the combination of cited prior art references would have the CDMA network terminal that communicates according to the CDMA protocol, but which accommodates a GSM SIM. Consequently, in combining the cited prior art, if a CDMA user with the subscription in the GSM core services would attempt to reach a number in the GSM service area, communication signals would be activated by the SIM card and by one of the MS interfaces, interfering and conflicting with each other. In the cited prior art references, the memory module would not be of use in such system because the SIM card can perform its function. While the CDMA terminal of the cited prior art would receive and transmit data required for location authentication during registration, a similar function would be attempted by the upper level authentication and registration communications. Consequently, there would be multiple registrations, which, in the essence, defeat the purpose of authentication. In addition, in each case, the CDMA and/or the GSM network would be modified as a result, which is undesirable. Since neither reference teaches or suggests that the functions of a resulting product could be performed without the undesirable results, Applicants submit that there is no reasonable expectation of success in combining Aisenberg, Ahn and Nevo.

### Claim 2

As to claim 2, Applicants submit that the cited prior art references fail to teach that “the count represents the number of times the mobile station has accessed the GGG” and that it “is equal to the stored number of times the mobile station has accessed the GGG”, as claimed. The Office Action relies primarily on Aisenberg as teaching these limitations.

Aisenberg discloses a memory storage module that can include a feature for saving information that allows a user to make one or limited number of calls or accesses to a mobile network managed by a remote server, with or without the use of their existing carrier minutes. The feature is further defined as a pre-paid calling feature. Typically, the nature of the prepaid calling services requires accounting for the purchased network time used during the phone calls. Typically, while such system is concerned with the amount of time spent and compares it with the purchased value, there is no concern for the number of calls made. Since the purchased time can be used in a single call or many calls, within the pre-paid amount, the counting of the number of calls is irrelevant. For this reason, there would be no value in storing the predetermined information on the number of calls in the memory module of Aisenberg or comparing the number of calls actually made with the stored information. By contrast, the count of Claim 2 represents the number of times the mobile station has accessed the GGG, and is equal to the stored number of times the mobile station has accessed the GGG. It is highly unlikely that the pre-paid calling feature of Aisenberg would seek the structure of claim 2. Therefore, Applicants respectfully submit that the Office Action has failed to set forth a prima facie case of obviousness as to claim 2.

Applicants respectfully submit that a prima facie of obviousness as to claims 1, 7, 12, and 17 has not been shown by the Examiner. Claims 2-6, 8-11, 13-16 and 18 are therefore patentable for at least the same reasons as given in the independent claims 1, 7, 12, and 17 and the dependent claim 2. For at least the foregoing reasons, Applicant respectfully requests a withdrawal of the rejection under 35 U.S.C. §103.

Applicant has reviewed the references made of record and asserts that the pending claims are patentable over the references made of record.

In view of the above, therefore, Applicant respectfully requests reconsideration and withdrawal of the rejection of, and/or objection and allowance of claims 1-35.

Should any of the above rejections be maintained, Applicant respectfully requests that the noted limitations be identified in the cited references with sufficient specificity to allow Applicant to evaluate the merits of such rejections. In particular, rather than generally citing whole sections or columns, Applicant requests that the each claimed element be specifically identified in the prior art to permit evaluating the references.

## CONCLUSION

In light of the amendments contained herein, Applicant submits that the application is in condition for allowance, for which early action is requested.

Please charge any fees or overpayments that may be due with this response to Deposit Account No. 17-0026.

Respectfully submitted,

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